## CIVIL STRIFE.

"A Dark Picture of the Republican Organization of the City."

MR. BLISS TO GENERAL ARTHUR.

The Engineer of the "Machine" Disdains to Reply.

The rumblings of discontent which were heard in the republican organization of this city prior to the at election have increased daily since, till now it seems as if there would be quite an unheaval in the rent district associations and even in the Central Association after the primary elections next month. There will be a determined effort on the part of a large number of republicans to break up what they call the "machine" and roorganize in some measure the different associations. This movement is headed by Mr. George Bliss, one of the most ardent of the republican party in this city, and one of its most persistent partisans. On the 12th of November an en letter was published in the HERALD from Mr. liss to General Arthur, chairman of the Central Republican organization, in which he complained of certain abuses in the Eighteenth and Sixteenth Assembly district associations, con-trolled respectively by Bernard Biglin and Michael Cregan, and asking that his charges be at once inves gated and that the recalcitrant members of the andidates for Aldermen on election day be dis-siplined. To this letter General Arthur did not condescend to reply, and the contest between the re spective followers of Messrs. Arthur and Bliss still continues unabated. Mr. Bliss contends that he herely wishes to reform the organization, not to btain control, and in a letter which is published explains the situation, and, after ing all the alleged abuses in the republican mization of the city, calls upon General Arthur so all the power he possesses to bring about the ssary reforms. He states that General Arthur as the power, and can use it or not as he chooses. himself (Mr. Bliss) he has always been stanch adherent of the party and always believed in "reform from within." Yet, though his efforts in that direction had been consistent, as well as continuous, they had not as yet met with success. With Coneral Arthur's assistance, however, he is confident that the necessary reform would be accom-

TEXT OF THE LETTER. addressed to General Arthur:-

General C. A. ARTHUR:— New YORK, Nov. 12, 1879.

General C. A. ARTHUR:— New YORK, Nov. 12, 1879.

Bear Rise—The election is over, and I am at longth free to gratify a desire long entertained to say a low words to you publicly without danger of doing real harm to either a cause or to individuals. If I did not think I should do good to a cause I should keep silent.

After the plan of the present republican organization of the city of New York had been prepared and adopted by William Orton and Jackson S. Schuitt the committee appointed for that purpose by the State Committee, it was remarked in Mr. Orton a presence, and concurred in by him, that the usefulness of the organization than to be established would last not more than ten years for the reason that everything degenerates in New York, and that everything degenerates as of sat as a political organization. Others present thought so highly of the plan adopted, with school and grant angainst unfair dealing, that they disputed from this observation. Ten years have not elapsed, and yet, I think, no one with any knowledge whatever of the present contision of the republican organization in this city has much doubt that the predetion is likely to prove correct unless vigorous measures are adopted.

That portion of the roll which embraced members residing in the present Elevanth district contained the name of so prominent is man as Thomas Shuppiy, who had notoriously long since removed out of the district. It here the name of at least one man who had avereily ceased to be a ropublican and who was named at the recent election as a Tammany Hall inspector. But that roll or that portion of it, was purity itself compared to some others. The roll of another district organization purported to contain the names of, I think, about as hundred persons. When notices were sent to them at the places designated on the roll more than half of them were returned with the message that the persons were not known there. The roll of the Nineteenth Assembly District Association contained about

he held note month are starty and pathicly conducted; that there is carried out at them that statument which I am you applicating at Sonator Bisinu's meeting a few days ago—viz., that every republican is entitled to vote just once and to have his vote counted fairly, adding as an eccessary supplement that in a republican association none but cit that before the vote? To that out will you not be the theoretic vote? To that out will you not not see the before the vote? To that out will you not not see the contract of the secondarion shall be the secondarion of the right of the secondarion shall be the secondarion of the secondarion shall be secondarion of the secondarion shall be secondarion of the secondarion shall make the benchmen understand that you really mean that the excerde of the secondarion shall be secondarion of the secondarion shall make the benchmen understand that you really mean which exist. Such a course on your part might consign to deserved retirement some men who have brought dispract proposed of the secondarion shall be secondarion which the secondarion shall be secondarion which like the rifteenth are not in accord with you, as in those which are oddedient to your will, but the former are but few in number. Correct and purify deal with.

I make this appeal publicly although anxious to avoid

those under your influence and the others will be easily dealt with.

I make this appeal publicly although anxieus to avoid "washing dirty lines in public," because I have tried in vain in my weak way to bring about that "reform from which I believe to be essential to the usefulness or long continuance of the organisation. I have accomplished little except to receive the ansers and surror those who glory in framt because they profit by it, and whose approvat is a disgrace to my honorable man.

I have but a single regret at at the course I feel compelled to pursue and that is that in thus publicly calling attention to the rotionness of the organization I seem to give encouragement to some of its encourse whom I have always opposed because I had and have no sympathy with them or their works. But I feel that their only chance of success will arise from the unwillingness of the organization to purify itself, a I have done my host to deprive them of this chance. Will you not do your best Your friend.

GEORGE BLISS.

chance. Wilfyou not do your best? Your friend.

GEORGE HLISS.

NOTHING TO SAY.

General Arthur was called upon by a reporter of the Hurald yesterday afternoon and a copy of the above letter was shown hun. He stated that he had seen it and had suching to say in regard to it. The reporter suggested that perhaps he confounded it with another letter from Mr. Bliss, published some time ago; but the General persisted that he had seen the letter exhibited and understood its contents. He would read it again, but he had broken his eyeglass. 'At any rate,' said General Arthur, 'sas I mentioned at first, I have nothing to say about it at all.' The reporter them asked what he thought of the Bliss statements concerning the December primary elections; but General Arthur still persisted in positive silence in regard to the matter, and the interview closed.

MAYOR COOPER AND HIS NOMINEES.

WAS MR. PATTERSON NOMINATED TO INSURE HIS HONOR'S SAPETY ?-NO CLEW TO GUIDE THE BEWILDERED POLITICIAN OUT OF THE

The excitement in political circles over the change in the personnel of the Board of Police Commissioners and the appointment and confirmation of Jacob M. Patterson, Jr., as Police Justice, was kept up all day yesterday. The situation was discussed up all day yesterday. The situation was discussed with great warmth, and speculation was the order of the day. The confirmation of the reported attempt to be made to remove Mayor Cooper upon Governor-cleet Cornell's accession to office came in for perhaps the greatest share of attention. Rumors that the Mayor would not be allowed to enjoy undisturbed the second year of his term have been current some weeks past, but until the publication in the Herald yesterday nothing definite was in the HERALD yesterday nothing dennite was owever, in naming Mr. Petterson for Police Justice past all the calculations of the political wiscacres he are wont to discuss every new phase in affairs. They were totally at a loss to comprehend how the Chief Magistrate could bring himself to give to one of his political enemies such an henorable and lucrative position. Not one of the anti-Tammany members of the Board of Aldermen had the slightest idea that they would be called upon to vote for Mr. Pat-terson until his name was sent in by His Honor. They all supported him, because he was acceptable They all supported him, because he was acceptable to Mr. Cooper, while the republicans gave him their votes on account of his being a very prominent member of their organization. The Tammany Aldermon tell into line and voted as their colleagues voted, so that the new member of the Police Court Bench received the unantmous support of all parties and

Mayor Cooper did not, it would appear, make up his mind to nominate Mr. Patterson to the late Justice Kasmire's place until Monday morning last. He felt assured, it is said, that the naming of Mr. Patterson would entirely accord with the wishes of General Arthur and, more than all, with the wishes of Governor-elect Cornell. A veteran politi-cian who has intimate relations with all the repullican leaders, when waited upon yesterday, gave the

following story in reference to the matter:—
"I have known for a week or ten days," said he, kind, and Mr. Patterson would have been a police justice some days before if the Mayor had not procrastinated so much. The first intimation I had about His Honor's contemplated action was about a week or so since, when one of the anti Tammany men told me that Mr. Cooper would do something that would astonish people before long. I asked what he meant, but he merely shook his head and said nothing. I afterward heard that this same man was going around to some of the leaders in the republican organization, asking them how Patterson would suit as a Police Justice. Little innuendoes of this character excited general curiosity. Everybody in the party knows that 'Jake' has all along wanted to become a police justice, and I suppose he has at some time impressed that fact upon the mind of the Mayor himself. The election of Mr. Cornell was a splendid thing for Patterson, who, ever since I have known him, has been considered his right bower. Mayor Cooper knew all these things, and in order to get into the good graces of the republican Governor gave his ally, 'Jake,' a snug little berth. The Mayor thinks that Patterson will look sut for him at the Executive Chamber in Albany, but if he imagines anything of the kind he will, in my judgment, be tooled."

Executive Chamber in Albany, but if he imagines anything of the kind he will, in my judgment, be fooled."

This is the general run of the gossip on the subject of Mr. Patterson's appointment. The course of the Mayor is thought to be designed for the protection of his interests next year, and even the members of the auti-Tammany organization can offer no other explanation. In this connection it may be stated that some of Mayor Cooper's friends are rather "put out" at his action in appointing Mr. John R. Voorhis a Police Commissioner. Some of these genticenen allege that Voorhis was named at the instance of ex-Comptroller Andrew H. Green, who is said to be snything but popular with the rank and file of the Irving Hall organization. The feeling on the subject of Mr. Voorhis' appointment is getting to be rather bitter, but no open attempts to create discord have as yet been made.

WILL THE MAYOR EN REMOVED?

The question as to whether or not Mayor Cooper will be asked to vacate his office shortly after the inauguration of Mr. Corneil as Governor was made the theme of somewhat heated discussion by the politicians. The interview between a Heatalor reporter and Mr. John D. Townsend, of counsel for ex-Police Commissioner Sidney P. N chols, was generally talked of as foreshadowing some important step to be taken in the matter of romoving the Mayor. The Tammany men, of course, regarded the question from their own standpoint, while their anti-Tammany brothere dismissed the rumors on the subject at once as groundless. As a fair specimen of what the politicians have to say about the matter a short interview with General Frank B. Spinola may be given.

"Do you think the Mayor will be removed?" asked

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"Do you think the Mayor will be removed?" asked the reporter.

"I do," was the reply; "I think Mayor Cooper will be removed on charges arising from out of many derelictions of duty on his part since he assumed office. The removal of Police Commissioners Smith and Nichols, I think, would be a sufficient cause of removal. The Mayor, in the cases of these two gentlemen, violated every principle of law, of justice and of constitutional right. He refused them counsel and, on the whole, treated them most unrairly. I think he could be impecabled for his action in this regard, and there are other charges upon which he could be proceeded against."

"What are they?"

"Well, in the first place, he has neglected to perform many duties which the law expressly commands him to perform. He has sought to evade the law in at least one instance, and the intervention of the courts had to be asked in order to protect the interess of men whom he thought to injure."

"Do you think then that formal charges will be made against Mayor Cooper?"

"Yes: I think a movement of that kind is on the carpet, and I have every reason to believe that it will be successful. Even should Mr. Cornell be disinclined to remove the Mayor, he will not dare to refuse to do so when he reads the arraignment which will be presented. It will be a most formidable list of charges and the Mayor will have some trouble in proving his innocence."

"AMANY RAESCURED.

A large number of other adnerents of Tammany expressed similar views on the subject, and it was the general impression that the fact that His thoor named Mr. Patterson as Police Justice was prima facie proof that he himself was afraid that some such action would be taken. This interpretation of the political events of Monday last had a most reasuring effect on the minds of the politicians, more especially of those connected with Tammany Hall. The latter were airraid that the present understanding between the republican and Wigwam Aldermon be given.
"Do you think the Mayor will be removed?" asked

was to be broken and a combination patched up between anti-Tammany and the followers of Cornell. Yesterday, however, it was demonstrated, at least to the satisfaction of those interested, that the present of the Board of Aldermen at yesterday's session in refusing to allow the Mayor to withdraw the name of Mr. Charles H. Truax for Police Justice in place of Henry Murray, the present incumbent, appeared to prove that no new 'deal' had been made. Mr. Truax was nominated by Mayor Cooper some weeks since, and the nomination was laid over. It would appear as if the Mayor had only sent in Mr. Truax as a "stall" in order to give the man of his choice time to "electioner" for his own confirmation when he should be sent in. Mr. Truax, however, had been nominated for the office, and the City Fathers could see no reason why the Mayor should want to withdraw his name. So they practically refused him permission for the present by laying His Honor's communication on the table. This action flurther complicates matters, and there is absolutely no telling how the present tangle will be unwound. The rumor that ex-Police Commissioner James E. Morrison was to be nominated yesterday for Police Justice in place of Justice Murray proved to be without foundation, for his name was not placed before the City Fathers. Mr. Morrison was about the City Hall a portion of the day, and seemed happy and cheerful at being released from the cares and duties of public office.

A SCHOOL INSPECTOR APPOINTED. Mayor Cooper yesterday appointed Joseph Wengler school inspector in place of ex-Senator Louis S. Goebel, who refused to accept the position.

BEGINNING HIS EIGHT YEARS' LABOR.

Mr. Patterson yesterday visited, with some friends, the Essex Market Court, where his associate, Justice Duffy, was sitting. He was immediately given a seat alongside the presiding magistrate, and when the police returns were gone over Justice Duffy courteously vacated his place, which was thereupon occupied by Justice Patterson. He listened to and decided a number of warrant cases. Among the first to come before him was Mrs. Mary Cumiskey, of No. 161 Lewis street, who charged her husband with ill treating her. The unfaithful spouse was reprimanded and held in bonds to keep the peace. Justice Patterson then went to the Court of Special Sessions, where, with Justices Duffy and Wandell, he tried some thirty cases of assault and battery and petit larceny.

ALDERMANIC DELIBERATIONS.

THE CITY FATHERS DISGUSTED AT MAYOR COOPER'S VETO OF A RESOLUTION HOSTILE TO THE "L" ROADS.

A regular session of the City Fathers was h day, with President Mott in the chair. Several lean politicians were present in anticipation to nominations being sept to the Relayer Cooper for commissionerships. Among the ere Mr. Henry Murray, Police Justice, candida for respeciationent, and Mr. Charles H. Truax, wh was recently nominated for the place. Instruction have been given to the anti-Tammany republic combination to reject Justice Murray. At the opening of business yesterday the Mayor sent in a col This communication was laid upon the table Another communication was received pomination had organized the movement to lay the Truax docement on the table, and a strenuous effort will be made to secure Judge Murray's confirmation at the next meeting of the Board. At the suggestion Alderman Haughton the following was passed:-Resolved. That the Department of Police be, and hereby respectfully requested to take the most efficient menaures to have the crosswalks at all the principal the oughfares in the city cleaned and kept in a passable codition for pedestrians, and especially so after every fall snaw and during incleament weather.

On motion of Alderman Morris a resolution w

On motion of Alderman Morris a resolution was adopted calling upon the Mayor to inaugurate all necessary legal proceedings to prevent further excrosofiments by the "L" road companies upon the Battery or other parks. The preamble sets for in that the Commen Council, a few weeks ago, instructed the Park Commissioners to notify the companies occupying a portion of the Battery Park "with their columns, rail cars and other obstructions," to remove the same; that instead of complying with such directions it was evident that these companies or others were preparing to usure, confiscate and destroy more of the Battery Park, as they had then on Battery place from columns, rails, timber and other materials for the erection of additional tracks; that the Common Council is the legal custodian of the public property of the Corporation, the revenues arising therefrom and the rights and franchises thereunto belonging, which were held in trust for all our people and as collateral security for the redemption of the debt of this city."

Mayor Cooper sant in a voto of certain resolution consuring the Park Department on the same subject. These resolutions instructed the department "to withdraw and cancel the permission heretofore granted to the elevated railway companies to occupy and use the public land known as the Battery Park." In his voto the Mayor says:—"However objectionable the action of the Department of Public Parks may have been in giving the consent referred to, and however questionable the right of the road to occupy the Park under such permission, the Board of Alderman has no authority to instruct the Department of Public Parks to withdraw and cancel such consent."

In connection with this veto Alderman Morris remarked that the Mayor had singularly vetoed all

such consent."

In connection with this veto Alderman Morris
remarked that the Mayor had singularly vetoed all
resolutions of the Board bearing upon interference
with the public parks by the "L" road companies.
The veto he had just sent in was in condemnation
or a request unanimously passed by the Aldermen
asking the Park Commissioners to give the rapid
transit companies, notice to remove their structures. or a request unanimously passed by the Aldermen asking the Park Commissioners to give the rapid transit companies notice to remove their structures within six mouths from the Battery. The franchise secured in this way was worth at least \$100,000 a year to the city. All public property was pledged to the redemption of the bonds of the city; all revenues arising therefrom should consequently be paid into the city treasury. If the Park Department had the right to permit these companies to use the Battery Park they had an equal right to permit them to run from Sixth avenue and Fifty-ninth street through Central Park to Eighth avenue and 110th street. As the resolutions simply embodied a request Mr. Morris saked that they be passed over the Mayor's veto. This proposition was lost by a vote of 1st to 2. Another vote in the affirmative would have secured its passage. Messrs. Robert Hall and President Mott voted against it.

Alderman Stewart delivered an enthusiastic speech, remarking that this was an historic question and that the lattery should not be handed over to greedy railroad capitalists.

CATHOLIC CHARITIES.

A report was received from the Finance Committee in favor of exempting the Roman Catholic Orphan asylums from payment of Croton water rents. In this report it is stated that the asylums are among the most deserving of the many charitable institutions in this city; that they are supported by private donations, and a small annual sum from the school fund; that 33,100 children have been maintained in them since 1825, and that if charged to the city those children would cost at least \$110 per head—a gross sum of \$3,861,000.

FILIBUSTERING ALDERMEN.

### FILIBUSTERING ALDERMEN.

The Brooklyn Common Council met as a Board of Canvassers yesterday afternoon, pursuant to a call of Mayor Howell. The republicans were all in their places, with the exception of Alderman Baird when the roll was called. The democrats, however their places, with the exception of Alderman Baird, when the roll was called. The democrats, however, in accordance with the policy which they agreed upon on Monday, remained away. The object of the democrats in absenting themselves from the meeting was to prevent a quorum from being obtained. Had a quorum been present they would be required by law to declare Alderman Dimon, of the Pirst ward, elected. Mr. Dimon is a republican and his accession to the ranks of his party in the Board would give the republicans a vote, which would make a tie. The democrats, with the aid of their independent republican allies, Alderman Smith, Petry, Dryer and Powers, now have a majority. By the recent death of Alderman McIntyre, of the Eighth ward, the democrats lost a vote, and as they believe they can elect a successor to the deceased Alderman from their party, they want to hold a special election to fill the vacancy before the Alderman-elect from the First ward shall be permitted to take his seat. Should he be admitted he would not only vote against holding a special election, but would also, it is feared, defeat savers! measures looking to the removal of minor employes of the republican party.

Alderman French said, addressing President Ray, who occupied the chair, after the republican shad been seated for fifteen minutes, waiting pattently for the democrats, who had no intontion of attending, that "there must be some reason for this delay, and he did not think they should be compelled to remain to suit parties who were not willing to join them." He moved that the Board adjourn until Monday, at half-past ten A. M., unloss called to remain to suit parties who were not willing to Join them." He moved that the Board adjourn until Monday, at half-past ten A. M., unloss called to remain to suit parties who were not willing to Join them." He moved that the Board adjourn delay motion prevailed and the meeting adjourned.

### WILLIE SPRAGUE'S TUTOR.

Marine Court yesterday, on behalf of Mrs. Senator Sprague, for a hearing in a suit brought against her by George Link, but, owing to the day being a holiby George Link, but, owing to the day being a holi-day, the hearing was necessarily postponed until this morning. In his complaint in the case Link alleges that in June last Mrs. Sprague engaged him in this city as tutor to her boy Willie, at the rate of \$50 a month, with board and travelling expenses, and that on this contract she owes him \$240. To this complaint an answer was put in on the part of Mrs. Sprague that she was a married woman, the wife of William Sprague; that the con-tract with Link was made by her in her capacity as such married woman, and for which she is not re-sponsible in law. The present motion is made on her behalf to compel the plaintiff to put in a reply to her answer, and this put at issue in the case the question of her non liability for the debt to recover which the suit was instituted.

# SHOWER OF STARS.

Professor Proctor on the Expected Meteoric Display, November 25-29.

BIELA'S DIVIDED COMET.

How to Distinguish the Meteors Attending On Its Track.

ASTRONOMICAL ILLUSTRATIONS.

TO THE EDITOR OF THE HERALD:-

Seven years ago astronomers were mourning the oss of a favorite comet. Discovered in 1826, Biela's comet had not for twenty years attracted more attention than others of short period, unless, perhaps, the circumstance that its orbit passes very near tha of the earth was regarded as a feature of interest. But in 1846, almost under the eyes of astronomers, this comet divided into two. "All seemed to be going on quietly and comfortably," Sir John Herwrote (as nearly as I can recall his words). "when, lo! suddenly, on January 13, the comet split into two distinct comets! each with a head and coms and a little nucleus of its own. What domestic troubles caused the secession it is impossible to conjecture; but the two receded farther and farther from each other, with some degree of mutual communication and a very odd interchange of light one day one head being the brighter and another the other—till they seem to have agreed finally to part company." He goes on to say that when the double comet, whose period of revolution around the sun lasts six years and eight months came back in 1852 the from each other and both easily visible in the same telescope. In reality, however, the distance had the greatest distance between the companion comets in 1846 had been but about 157,000 miles, in 1852 it amounted to about 1,250,000 miles. Whether the comets returned in 1859 is not known, for the part of the heavens which they crossed (in that case) in 1859 was too near the sun for the comets to be visible. In 1866, however, they should have been the next return should have occurred, a still more careful search was made for the dissipated and doubtless demoralized comets, but again without avail. During the first week in October the comet should have passed its point of nearest approach to the sun. Wock after week passed without its being detected, and, as I said above, in November, 1872, astronomers had given up the hope of ever again seeing Biela's comet in the ordinary manner. In October, 1872, in an essay which appeared in probability that a display of meteors following in the track of that comet would probably be seen some time between November 25 and December 5. "The skies," I said, "should be carefully watched. The shower of meteors will fall in such a direction that shooting stars may be looked for at any time of the night." I pointed out that meteors attending on the track of Biela's comet could be distinguished from others by the course they follow on the sky, each travelling on a path radiating from (observe, not extending from) a part of the constellation Andromeda; in fact, from the neighborhood of the star Gamma Andromeda, which marks the left foot of the Chained Lady-that is, the foot which lies on the right as you face the constellation when Andromeda's head is uppermost, which, unfortunately (so



far as recognition of the constellation is concerned)

It will be seen from figure 1 that Andromeda is not the last week of November. The constellation is nearly overhead, but to the east of the zenith at eight. The stars of the constellation are carried slowly from east to west. Thus Andromeda passes over to the west of the point overhead. The con stellation does not reach a convenient elevation for observation until long after midmght; but the oberver need only consider its radiant with the object of ascertaining whether falling stars seen in the lasweek of November actually belong to the system of bodies following in the track of Biela's comet, and so far as this purpose is concerned it suffices to note ated, not to keep special watch on that part of the heavens. In fact, the most conspicuous members of a noteor system are usually those seen at a con-siderable distance from the radiant point.

Those who watched the heavens during the last week of November, 1872, were amply rewarded. Of the night of November 27 there was a very remarkable display of meteors. The falling stars were not on the average so bright as those seen during the display of November 13-14, 1866, but they appeared in even greater numbers. There could be no do as to their being attendants on Biela's comet: for rence of the shower on the very day when the earth crosses the track of that comet, the meteors radiated from the right part of the sky-viz., from near the star Gamma of Audromeda. It may be well to dwell for a moment on the importance of this point. In an article which appeared in the Belgravia Magazine for November, and from which extracts were quoted in your columns a few days ago, I explained portance of the general phenomenon, the radiation of the meteors of any system from a fixed point among the stars. But it is well to notice that while this general phenomenon indicates that the meteors visit the earth from without the special position of the radiant point indicates the position of the path along which the meteors

cluster passed through the vaporous mass of the planet different parts of the cluster would be differently retarded; though some, retarded very little, would continue to move appreciably in the same path as before. Others, retarded more, would travel thenceforth on a smaller orbit, having such a peation as a.d. an orbit passing through the part of the planet P where these bodies were thus retarded. Now, the meteors most retarded would get in advance of their fellows, those least retarded in agging behind. This sounds paradoxical, but is in reality just. Those most retarded would travel on a smaller orbit and would complete their circuit in a shorter time. Thus at the end of a few circuits the cluster which had had the figure M at the beginning would assume the shape M, of which the part on the inner track is that which had passed through the densest part of the vaporous planet. Now would any very long period have to clapse before such meteor system got strewn all over the space between the orbits A A' and a a'.

With regard to the prospect of a display of Andromedes on November 27, or between November 25 and 29 next, it must be remembered that the farth does not pass through the track of the comet so near the head of the comet as in 1872. Then the nead of the comet as in 1872. Then the nead of the probably, then, these will not be so closely clustered as those which produced the display of November 27, 1872.

I would invite special attention to the desirability orbit is one of a possible set of orbits which cross the earth's track at a special point and in a special way. I should hardly deem it necessary to point his out, were it not that in some books, supposed to be intended for the popular explanation of me-teeric phenomena, the strange (I might almost say, considering the object and claims of such works, the gross) mistake has been made of assigning to two perfectly distinct meteoric systems—those of November 13-14, called the Leonides, and those of August 10 11, called the Perastics—the same orbit. I forget to whom this mistake was originally to be attributed, but it is repeated (if it was not first made) by Guillemin, and Guillemin has been followed by Camille Hammarion, Lockyer and others of those who do not recognize the essen-tial necessity of duly blonding mathematics with astronomy, even though the mathema-tics be kept out of sight in the popular treatment of the subject. Of course what has been learned since 1866 respecting the August and November meteors has caused this error to disappear. (I myself removed it from Guillemin's work, when Bentley placed that treatise in my hands for revision.) But in reality no one acquainted with the ele-ments of dynamics would have fallen into the mistake of supposing that meteors which fall on the earth from the direction of the constellation Perseus on August 10 can travel in the same orbit around the sun as moteors which fall on the earth from the direction of the constellation Leo on November 13-14. So, again, the idea thrown out that the meteors which reached the earth from the direction of the constellation Andromeda on November 27 may have been simply the ordinary November meteors delayed a fortnight is wholly untenable. The paths in space pursued by meteors which comfrom the direction of Leo on November 13-14, and from the direction of Andromeda on November 27-28, must of necessity be altogether dissimilar. How different are the actual paths traversed by these two sets of meteors will be inferred from the accompanying figure (fig. 2), in which are shown the paths of the earth, Jupiter, Saturn, Uranus (that of Mers is omitted for the sake of dis tinctness), the Leonides and the Andromedes. It will be seen from the arrows that the two sets of meteors do not even travel the same way round the sun but that whereas the Leonides meet the earth (at the point marked 1) the Andromedes overtake the earth (at the point marked 2). It should be added that each system crosses the earth's orbit descendingly from the north, but with different degrees of slope,

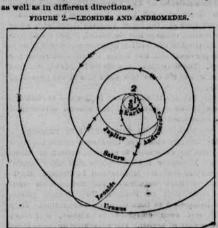


Diagram showing the paths pursued by the Leonides of neteors of November 13-14, and by the Andromedes of neteors of November 27-28. Two circumstances, both of considerable interest though only one has hitherto received much atten tion, have still to be mentioned in relation to the shower of November 27, 1872. The first is thus described by Signor Denza, who observed the shower for 6% hours and counted with his fellow workers no less than 33,400 meteors. This number, he says, "is far less than the truth, for we found it frequently impossible to count them. The maximum display took place between 7h. and 9h., and for 21 ance in the sky around the radiant point (very clearly indicated near Gamma Andromeda) was that of a meteoric cloud." The significance of this phenomenon will be more clearly recognized when we consider it in connection with what followed after the display. The German astronomer Klinkerfuca, noting that the great shower had come slantingly tion Andromeds, seems to have thought that it was Biela's comet itself which had thus passed over the earth from the north, so that after the display it passed on toward the south, nearly toward the star Theta of the Centaur, which lies opposite Gamma of Andromeda. He therefore telegraphed to Mr. Pog-son, of Madras, "Biela touched earth on November 27: look out for it near Theta Centauri." Mr. Pogson did so, and on the morning of December 3 discovered two cloudlike objects, which were Tound to be moving athwart the stellar heavens in a direction inferred that what Mr. Pogson had seen was the shower of meteors which had passed over the earth that neither of the two objects seen by Mr. Pogson had in reality travelled in the same path as the meteor cluster causing the display of falling stars.

It is rather strange that a mathematician so able as Mr. Hind, the superintendent of the "English Nautical Almanac," should have adopted the opin-ion that possibly the meteor cluster of November 27 may have been Biela's comet itself, delayed in some way twelve weeks. It is altogether inconsistent with the laws of dynamics that a body travelling in an orbit such as the orbit of Biela's comet, that is an orbit of short period (for the comet circles three times round the sun in twenty years), should be delayed twelve weeks in so short a time as twenty years, the interval between the last apparition of the

layed twelve weeks in so short a time as twenty years, the interval between the last apparition of the comet and the year 1872. Certainly any cause which could have produced such a change must at the same time have altered the orbit of the comet to a remarkable degree, whereas we can only associate the display of November 27 with Biela's comet at all by assuming that the meteors were following in the unchanged or but slightly changed track of that comet. Strangely enough, not only does Hind adopt as admissible the theory that Biela's comet may have been delayed twelve weeks, but he actually proceeds to calculate the position of the comet thereafter, as though the comet's orbit had remained entirely unaltered.

It is indeed worth noticing that the process by which meteoric systems have been formed into a long, train following after a comet, but also with members of the family travelling in advance of the comet, has not hitherto been satisfactorily indicated. It can readily be shown that if a meteor cluster were so dispersed that its component parts were not kept in company by their mutual attractions they could never have been collectively caused by planetary disturbance to adopt the same general orbital track. We require some other explanation, then, than the planetary perturbations conveniently called in to secount for the actual condition of many meteor systems, as, for instance, the August system, which is thrown quite round the immense orbit of Comet II., 1862, extending nearly twice as far from the sun as the orbit of Neptune. I believe that when due account is taken of this difficulty it will be found that the most leasible explanation is that which I suggested during my recent course of lectures in New York.

The Police Commissioners met yesterday and Mr. MacLean acted as chairman. Commissioner Voor-his presented his credentials and by order of the Board they will be recorded on the minutes. The chairman of the Street Cleaning Committee was given thil authority to assign and direct the em-ployes of that bureau, Cquimissioner Voorths was appointed on the Committee of Repairs and Sup-plies, After the transaction of some routine busi-noss the Board adjourned.

as those which produced the display of November 27, 1872.

I would invite special attention to the desirability of scrutinizing (with telescopes of low power and large field of view) the region around the radiant point of the Andromedes, not only on the night of 18 a meteoric cloud was seen in this region in 1872 during the display, it is most probable that with the telescope the flight of approaching meteors might be seen (end on) before the shower began. If Pogson could see retreating meteor flights, on a twilight sky, too, an approaching meteor flight might well be seen. The place to search for it would, of course, be the region where the radiant of the Andromedes is indicated in fig. 1.

RICHARD A. PROCTOR. PROFESSOR PROCTOR CHALLENGED.

According to your report of Professor Proctor's sermon he seems to imagine that he has discovered discrepancy in the Bible, though he admits that, possibly, it might be explained. But he says that he has never seen it explained, and he just leaves it without any attempt at an explanation. Of course the inference must be—and probably this is what he wanted his hearers to draw—that the Bible is a book of contradictions, and, therefore, not worthy of credit. There is probably Proctor or any other man so disposed could not find apparent discrepancies. He might take the songs of solomon and the proverbs of Solomon and subject them to the severe scrutiny of his peculiar spectrum and imagine a hundred apparent discrepancies and proclaim his discovery to the world, and then, of course, it would be only a natural consequence for the world to say that "a greater than Solomon is here." Has it ever occurred to the mind of this scientist that it would require only a little exact acrutiny to discover discrepancies in his own published scientific statements? In one of his published scientific statements? In one of his published lectures he maintained the theory of spontaneous generation as to the origin of life, and also that the beginning of life on this earth may be due to the fall of meteors coming from distant shores. Here are two theories, and he advocated both of them in the same locture. Which one does he believe? Or does he believe both? If he could prove either of them to be true he would be greater than any scientist, and greater than Solomon. But in his Sunday discourse he advanced the idea that this earth is 500,000,000 years old. That is an enormous figure. How did he get this calculation? Can it be possible that he believes this calculation even approximates the truth? He may believe it. But he cannot prove that the earth is over 10,000 years old. He has not a fact or a solitary argument that is based on logic or true science to prove that this globe has been in existence over 10,000 years. I affirm this proposition, and I will meet him or any scientist on this question. I think that they have made a great mistake—that they are very far wrong on this question as to the great antiquity of our globe. Moses has given us the only true cosmogony. I have given attention to this question, not being able to preach during the last twenty years, and I have found out the stone of stumbling and the rock of offence. My health is now so improved that, though I am a septuagenarian, I can deliver one or two discourses a week, and I will lead in this discussion or he may lead, and we will speak an hour each one or two evenings a week all winter if necessary. I will be able to convince any audience or even Professor Proctor himself that their chronological reckonings are equally opposed to scien course, it would be only a natural consequence for the world to say that "a greater than Solomon is

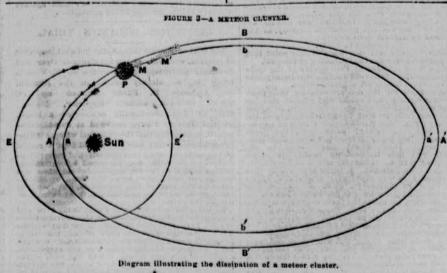
THE HERALD'S STORM WARNINGS.

[From the Rochester (N. Y.) Herald, Nov. 24.] The New York Herald's weather department has sent twenty-seven storm warnings to the Herald Bureau in London, to be made public in England during the past seven months, and in only two in-stances has the predicted storm failed to make its appearance. The notification was made from two to five days beforehand. The HERALD cites an instance in which its warning might have saved a heavy less to the English Navy. It says:—"On March 18, 1878, we sent word to London that in five days a storm would reach the British coasts, with heavy rains, possi-bly snow, and southeast to northwest gales." That storm arrived exactly as predicted, and in it Her Majesty's ship Eurydice was lost in sight of the Isle of Wight. Her Majesty's navy could not recognize an American weath diction; but if it had been possible to lay aside its supreme dignity to that extent it would have saved a ship and many precious lives. It is not simply to call attention to the great value of the Herald's weather department that we note these facts, weather department that we note these facts, though they ought not to be ignored, but to show how successfully meteorological science of 'c-day is grappling with the problems presented by atmospheric phenomena. It is but a few years since it was deemed possible to forecast intelligently the appearance of a storm, excepting by the clouds or direction of the wind within one's own horizon. To-day, thanks to the systematic and profound study of the question, to the enlightened liberality of our government and such private enterprises as the New Your Herald, and to the efficient and liberal use of the telegraph, the coming of all great storms New York Herath, and to the efficient and liberal use of the teiegraph, the coming of all great storms is announced to the readers of American newspapers, especially in the East, and, as we have shown, even the people of Great Britain and the shipping of Western Europe may profit by the predictions. Yet we consider this science still in its intancy. Every year the number of its disciples increases, and with every new post of observation added to the list already established there is a closer approach to perfect accuracy. With improved and more sensitive apparatus and the fuller knowlege of the relations of the currents with each other, of the effect of the wind in its several directions, and other points to be determined, or even thought of, practical value to meteorological science will be immediately increased.

VALUE OF ARCTIC EXPEDITIONS [From the Newburyport (Mass.) Herald, Nov. 21.]

THE NORTH POLE. What makes people go on Arctic expeditions? What is the use of them? At one time it was thought that a shorter practicable passage might be discovered between the Atlantic and Pacific ports, but that day has gone by. Everybody knows that there is no Northeast or Northwest passage which is available for general commerce. Then there are people who think that some important scientific results are to think that some important scientific results are to be obtained by reaching the North Pole, but beyond the extension of the knowledge of geography a few hundred miles very little could be expected which would increase the happiness or enlarge the knowledge of mankind. Still, the Arctic expeditions continue, and the latest is now at its work of exploration. There are many who sneer at the expenditure of money and the danger incurred as a waste of money and human life for a useless object. The knowledge of the universe in which we live has been an object on which the greatest men have considered it worth their while to expend their lives. In the construction of the Panama Railroad there was a greater loss of life than in any Arctic exploration; in the Gioucester fisheries every year the vessels lost and the men who are sunk in the Atlantic are more in number and of more money value. The petty wars of small States like Peru and Chile waste far more money and a greater number of lives than all the Arctic expeditions, and they are worse than useless, while there is a gain to the accumulated knowledge of the world which is permanent, even if it be not great, by each of the expeditions which has been sent to the Pole. All knowledge is gained by slow degrees. The use of movable types in printing was the result of ages of inquiry where many were close upon the track of the discovery, and so it has been with every advance in knowledge. In the course of civilization it has seemed as if no expenditures of time and human endeavor was too great for the least gain in extending the sphere of knowledge or or man's control over the natural forces. This consideration has operated on the minds of men interested in scientific over the natural forces. This consideration has operated on the minds of men interested in scientific nows, tigation and has led them to favor such expeditions

POLICE BOARD.



so arrived. And though the actual orbit of the meteors cannot be thus inferred, only the position of that part of their path along which they enter our atmosphere, yet it becomes known that their ter or comet travelling in the orbit AA. If such a